

FUJR 17.774 (100794-11508)  
09/672,462

In the Claims:

1. (currently amended) An apparatus for sending a ringing signal to notify a called terminal of the presence of an incoming call addressed thereto, comprising:
  - ringing voltage generating means for generating a ringing voltage;
  - ringing signal sending means for sending out a ringing signal over a subscriber line by outputting the ringing voltage with a predetermined duty cycle of a ringing period and a silent period;
  - data transfer means for performing a data transfer to the called terminal over the subscriber line during one of the silent periods;
  - feed impedance selection means ~~for selecting~~ working in conjunction with one or more switches to select a low-impedance feed voltage in the one of the silent periods during which the data transfer is performed, and selecting the a high-impedance feed voltage in the other silent periods during which no data transfer is performed; and
  - feed impedance setting means for providing the high-impedance feed voltage to the subscriber line when said feed impedance selection means selects feeding of the high-impedance feed voltage, wherein the high-impedance feed voltage is realized by inserting a predetermined resistance on the subscriber line in series with a subscriber line circuit (SLIC) that drives the subscriber line, while the low-impedance feed voltage is provided by removing the predetermined resistance from the subscriber line.

2. (original) The apparatus according to claim 1, further comprising path set-up means for establishing a path to the called terminal only when the data transfer is scheduled.

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3. (cancelled)

4. (original) The apparatus according to claim 1, wherein:

said ringing voltage generating means comprises a ringing voltage source and a ringing signal bias voltage source; and

said feed impedance setting means comprises a resistor coupled to one of said ringing voltage source, said ringing signal bias voltage source, and said ringing voltage generating means itself.

5. (original) The apparatus according to claim 1, wherein said feed impedance selection means selects the high-impedance feed voltage during a short interrupt period which is contained as part of the ringing period.

6. (original) The apparatus according to claim 1, wherein said feed impedance selection means selects the high-impedance feed voltage for a predetermined period at the beginning and end of the one of the silent periods during which the data transfer is performed.

7. (currently amended) An apparatus for sending a ringing signal to inform a caller of the presence of an incoming call addressed thereto, comprising:

ringing voltage generating means for generating a ringing voltage;

ringing signal sending means for sending out a ringing signal over a subscriber line by outputting the ringing voltage with a predetermined duty cycle of a ringing period and a silent period;

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feed impedance selection means for selecting the working in conjunction with one or more switches to select a high-impedance feed voltage in the silent period to drive the subscriber line; and

feed impedance setting means for providing the high-impedance feed voltage to the subscriber line when said feed impedance selection means selects feeding of the high-impedance feed voltage,

wherein the high-impedance feed voltage is realized by inserting a predetermined resistance resistance on the subscriber line in series with a subscriber line circuit (SLIC) that drives the subscriber line.

8. (original) The apparatus according to claim 7, wherein said impedance selection means selects the high-impedance feed voltage during a short interrupt period which is contained as part of the ringing period.

9. (new) An apparatus for sending a ringing signal to notify a called terminal of the presence of an incoming call addressed thereto, comprising:

a ringing voltage generator to generate a ringing voltage;

a ringing signal sender to send out a ringing signal over a subscriber line by outputting the ringing voltage with a predetermined duty cycle of a ringing period and a silent period;

a data transfer unit to perform a data transfer to the called terminal over the subscriber line during one of the silent periods;

a switch controller to control one or more switches;

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a feed impedance selector working in conjunction with said switch controller to select a low-impedance feed voltage in the one of the silent periods during which the data transfer is performed, and selecting the a high-impedance feed voltage in the other silent periods during which no data transfer is performed, said selection based on said control of said one or more switches; and  
a feed impedance setting unit to provide the high-impedance feed voltage to the subscriber line when said feed impedance selection means selects feeding of the high-impedance feed voltage, wherein the high-impedance feed voltage is realized by inserting a predetermined resistance on the subscriber line in series with a subscriber line circuit (SLIC) that drives the subscriber line, while the low-impedance feed voltage is provided by removing the predetermined resistance from the subscriber line.